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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/511,445	02/22/2008	William J. Gordon-Kamm	1115	1983

7590 04/09/2003

Pioneer Hi-Bred International Inc  
Corporate Intellectual Property  
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Johnston, IA 50131-1000

EXAMINER
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COLLINS, CYNTHIA E

ART UNIT	PAPER NUMBER
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1638

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DATE MAILED: 04/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action**

Application No.

09/511,445

Applicant(s)

GORDON-KAMM ET AL.

Examiner

Cynthia Collins

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--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 27 March 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY** [check either a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
  - (b) ☐ they raise the issue of new matter (see Note below);
  - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
  - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_

3. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: see attachment.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☐ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: \_\_\_\_\_.

Claim(s) objected to: \_\_\_\_\_.

Claim(s) rejected: \_\_\_\_\_.

Claim(s) withdrawn from consideration: \_\_\_\_\_.

8. ☐ The proposed drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_.
10. ☐ Other: \_\_\_\_\_

*Advisory Action Attachment 5. c)*

Claims 5, 10-14 and 15-17 remain rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, for the reasons of record set forth in the office action mailed July 15, 2002.

Applicant's arguments filed March 27, 2003, have been fully considered but they are not persuasive.

In response to the Examiner's previous contention that the specification has not characterized geminiviruses as being useful in increasing endoreduplication and yield, Applicant argues that the application provides extensive discussion and characterization of the nature of geminivirus replicase polynucleotides required by the present claims, and a complete disclosure for methods of using replicase polynucleotides to increase yield and endoreduplication (reply page 2).

While the specification does discuss geminivirus replicase polynucleotides in general, and while the specification does disclose methods for the introduction of geminivirus replicase polynucleotides into plants, the Examiner maintains that the specification does not characterize geminiviruses in general as being useful in increasing endoreduplication and yield, as the specification discloses only a single species of geminivirus that functions to increase endoreduplication and yield.

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In response to the Examiner's previous contention that Applicant has not characterized Rb binding function per se as being involved in increasing endoreduplication and yield, Applicant points out that the specification defines a replicase polynucleotide as encoding a replicase polypeptide exhibiting Rb binding function, and discloses that the replicase is known to bind to a well-characterized motif on the Rb protein (reply page 2).

While the specification does define a replicase polynucleotide as encoding a replicase polypeptide exhibiting Rb binding function, and while the specification does disclose that the replicase is known to bind to a well-characterized motif on the Rb protein, the Examiner maintains that the specification does not characterize Rb binding function per se as being required for the function of increasing endoreduplication and yield.

Claims 5-6 and 10-17 remain rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for methods for increasing endoreduplication and crop yield by stably transforming a plant with an isolated wheat dwarf virus RepA geminivirus replicase polynucleotide, does not reasonably provide enablement for methods for increasing endoreduplication and crop yield by stably transforming a plant with an isolated plant geminivirus replicase polynucleotide, for the reasons of record set forth in the office action mailed July 15, 2002.

Applicant's arguments filed March 27, 2003, have been fully considered but they are not persuasive.

Applicant first notes that claims 3 and 9 require the wheat dwarf virus RepA geminivirus replicase polynucleotide and are therefore presumed enabled (reply page 3).

The Examiner confirms that because claims 3 and 9 are limited to the wheat dwarf virus RepA geminivirus replicase polynucleotide they are presumed enabled.

Applicant argues that the specification discloses various geminivirus replicase polynucleotides suitable for increasing endoreduplication and yield, and that the specification provides a working example and a reasoned analysis for the suitability of various geminivirus polynucleotides for increasing endoreduplication and yield. (reply page 3).

As discussed *supra*, while the specification does discuss geminivirus replicase polynucleotides in general, and while the specification does disclose methods for the introduction of geminivirus replicase polynucleotides into plants, the Examiner maintains that the specification does not characterize geminiviruses in general as being useful in increasing endoreduplication and yield, as the specification discloses only a single species of geminivirus that functions to increase endoreduplication and yield.

Applicant also argues that there is no indication that endoreduplication or crop yield were determined or considered by the cited reference of Hanley-Bowdoin, and that Hanley-Bowdoin studied disease resistance mechanisms. Applicant argues that the observation that their transgenic plants were normal in appearance and fertility says nothing about endoreduplication, as nuclear analysis is required to determine endoreduplication and total seed production is needed to determine yield (reply page 3).

With respect to the cited reference of Hanley-Bowdoin, the Examiner acknowledges that Hanley-Bowdoin studied disease resistance mechanisms, but the Examiner maintains that the

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observation of Hanley-Bowdoin their transgenic plants were normal in appearance and fertility is relevant to the enablement of the claimed invention, as one would expect plants exhibiting increased endoreduplication and yield to be larger in size. The Examiner also acknowledges that nuclear analysis would be required to determine endoreduplication directly, but maintains that the claims are not limited to yield defined as total seed production.

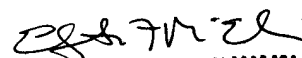
***Remarks***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Collins whose telephone number is (703) 605-1210. The examiner can normally be reached on Monday-Friday 8:45 AM -5:15 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson can be reached on (703) 306-3218. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-4242 for regular communications and (703) 308-4242 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

CC  
April 3, 2003

  
ELIZABETH F. McELWAIN  
PRIMARY EXAMINER  
GROUP 1600